

leads of which mate with corresponding male connector pins within a craft unit-receiving cup-like portion of the battery-charging and storage station. Left side portion 51 adjoins lower end portion 54 at corner region 71, while right side portion 52 adjoins lower end portion 54 at corner region 73. Each of these corner regions 71 and 73 has a respective passageway 81, 83 through which a support cord, such as a neck strap 84, may be secured.

Disposed in right side portion 52 adjacent to corner region 73 of the craft unit is a connector receptacle port 87, which is configured to support a cylindrically configured, sealed, multi-pin receptacle by way of which telephone communication signals and/or digital communication signals may be routed, via an associated sealed, cylindrically configured, plug assembly between the craft unit 10 and an external device, such as test head 14.

As noted above, the contact-sensitive display screen panel 43 of craft unit is protected by a pivotable lid 50, shown in its closed position in FIG. 2, in its open position in FIG. 3, and in its fully extended position in FIG. 4. Lid 50 is mechanically attached the craft unit by means of a left side lid pivot attachment 75 adjoining the intersection of the left side portion 51 with the upper end portion 55 of the craft unit, and a right side lid pivot attachment 76 adjoining the intersection of the right side portion 52 with upper end portion 55 of the craft unit.

SUMMARY OF THE INVENTION

In accordance with the present invention, these lid pivot attachments are configured to enable the lid to be easily pivoted between its closed and open positions, and to be stably locked as a support member in its fully extended attitude. The lid itself has a generally convex shape, following the contour of a pair of left and right side panels, through which the craftsperson grasps and pivots the lid from its closed attitude atop the display panel to its open or extended attitudes. Disposed along a rear edge of lid is a lid pin support element. Lid pin elements extend from opposite ends the lid pin support element and engage left side and right side hinge assemblies.

Each lid pin element has a cylindrical body portion, which is joined to a tab element by an arm therebetween. The arm fits within a slot in a longitudinal channel element disposed immediately adjacent to the lid pin support element at the rear edge of the lid. The tab element is translatable along the underneath side of the lid. Each lid pin element is biased by a compression spring toward a respective side panel of the lid, so that a chamfered end portion of the lid pin element is normally urged into engagement with a corresponding flat surface at an interior bore of a post of a hinge arm element of a respective one of hinge assemblies.

A respective hinge assembly has a hinge plate, a first side of which is generally flat and has a circular bore sized to accommodate a shaft extending from a first side of a hinge arm plate of a hinge arm element. This shaft extends through a cylindrical member at a second side of the hinge plate and is surrounded by a generally annular element having a key tab, that is sized and shaped to fit within a corresponding keyed slot in a respective one of the lid pivot attachments of the craft unit. Extending from a second side of the hinge arm element is a cylindrical post having an interior bore with a pin-capturing slot in which a chamfered end of a lid pin may be seated.

Adjacent to the shaft is a bump, which is sized to ride in an arcuate depression or channel in the first side of the hinge

plate. Terminal ends of this arcuate depression or channel are deeper than the remainder of the arcuate depression and serve to capture and retain the hemispherical bump of the hinge arm element when seated therein by the action of a compression spring that surrounds the shaft of the hinge arm plate to an end portion of which a hinge arm cap is affixed. For this purpose, the compression spring is seated between an annular or circular depression in one face of a keyed ring member on a second side of the hinge plate, and a similar depression in the hinge arm cap. As a result, the compression spring is operative to push the hinge cap (to which and end of the hinge arm shaft is affixed) away from the second side of the hinge plate, and thereby urge or draw the hinge arm plate against the first side of the hinge plate in which the arcuate channel is formed. Consequently, the hemispherical bump on the hinge arm is firmly urged against the bottom of the arcuate depression or channel, so that upon engaging the deeper terminal ends of the arcuate channel, which define closed and open positions of the lid relative to the display panel, the lid will be firmly retained at those attitudes.

The radial length of the arcuate depression or channel is such as to limit pivotable movement of the lid between its closed and open positions, as long as the tab elements are in their normally spring biased positions, urging their associated lid pin elements into engagement with flat land surfaces of the interior bores of the hinge arm elements of the hinge assemblies.

To rotate the lid from its open position, to its fully extended position, the craftsperson translates the tab elements against the biasing of compression springs, so that the reduced thickness portion of the first end of each lid pin element becomes disengaged or unlocked from a slot in the interior bore of the hinge arm element of a respective hinge assembly. Once rotated 180° to its fully extended position, finger pressure against the tab elements is released and the tab elements are allowed to again be biased by the compression springs, locking the reduced thickness portions of the lid pin elements in slots of the interior bores of the hinge arm elements of the hinge assemblies, so that the lid will be stably retained as a support element in its fully extended position.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 diagrammatically illustrates a portable telecommunications test system described in the above-referenced co-pending '317 application;

FIGS. 2, 3 and 4 are pictorial views of the housing configuration of a craft unit embodying the functionality described in the above-referenced co-pending '317 application, with its pivotable display panel lid in respective closed, open and fully extended positions;

FIGS. 5, 6 and 7 are respective top, top perspective and bottom perspective views of a pivotable display panel lid;

FIG. 8 shows the configuration of an individual lid pin element;

FIG. 9 is a perspective bottom view of a lid;

FIG. 10 is a top perspective view of a lid;

FIGS. 11-14 are respective perspective views of the configuration of a hinge assembly;

FIG. 15 diagrammatically illustrates the manner in which a shaft extends through a cylindrical member at a second side of a hinge plate;

FIG. 16 diagrammatically illustrates a keyed slot in a lid pivot attachment of a craft unit;